

SCANIA

SPECIFICATION

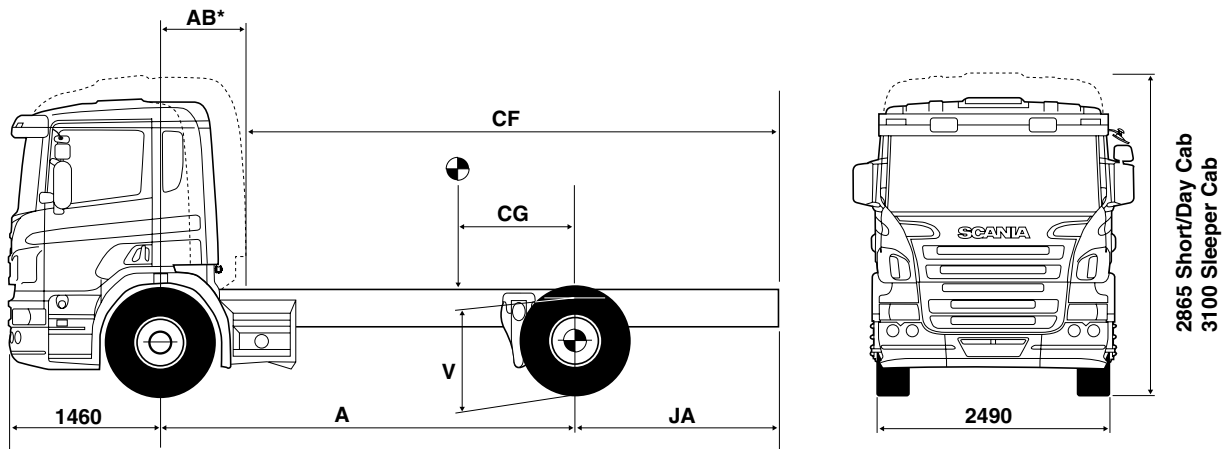
P-series

P 230 DB4x2MNA

19000Kg GVW

TWO AXLE RIGID/DRAWBAR

P



AB (centreline of front axle to start of bodywork) Short — 450 Day — 610 Sleeper — 875

* Increases by 15mm with air deflectors

DIMENSIONS (mm)

A		4500	4700	4900	5100	5300	5500	5700	5900	6300
BLR	Day Cab	6182	6514	6843	7173	7510	7837	8198	8530	9250
	(feet)	(20.3)	(21.4)	(22.5)	(23.5)	(24.6)	(25.7)	(26.9)	(28.0)	(30.3)
	Sleeper	5705	6040	6372	6705	7041	7373	7737	8071	8800
	(feet)	(18.7)	(19.8)	(20.9)	(22.0)	(23.1)	(24.2)	(25.4)	(26.5)	(28.9)
CF	Day Cab	6180	6510	6840	7170	7510	7830	8190	8530	9250
	Sleeper	5705	6035	6365	6705	7035	7365	7735	8065	8795
JA	Day Cab	2290	2420	2550	2680	2820	2940	3100	3240	3560
	Sleeper	2080	2210	2340	2480	2610	2740	2910	3040	3370
JA Max		4000	4000	4000	4000	4200	4400	4400	4400	4110
CG Max	Day Cab	1024	1069	1116	1162	1205	1251	1282	1326	1392
	Sleeper	1000	1043	1089	1134	1176	1220	1250	1293	1356
CG Min	Day Cab	799	834	869	904	937	972	992	1025	1066
	Sleeper	773	806	840	874	906	939	958	989	1028

V unladen	V laden	Chassis Height
1000 mm	970 mm	Normal (N)
878 mm	854 mm	Low (L) ¹

BLR = Max. bodylength to suit weight distribution. CG dimension for body and payload calculated for standard model at standard GB plated weights. V dimension measured to top of frame at rear axle centreline. Rear overhang (JA) can be specified in 10 mm steps up to maximum – check legality.

¹Dimensions assume '60 series' tyre fitment

PLATED WEIGHTS – AWR

	Front Axle	Rear Axle	GVW	GTW \$
Design Gross	Kg 7500†	11500	19000	22500
Legal Max in GB	Kg 7100¶	11500	18000	21500

† Front axle capacity up to a maximum of 9000 kg available as option.

¶ Legal front axle capacity limited by tyres.

\$ GTW 28000kg design and GB when fitted with trailer brakes (N/A with G670 gearbox).

Increases to 40000kg with '270' or '310' engine and R660 rear axle gear. GR905 gearbox recommended as minimum.

Plated weights dependent on statutory tyre limitations.

CHASSIS/CAB WEIGHTS

(Tolerance +/- 2.5%)

Axle distance	Front	Rear	Total (kg)
4500	4164	1591	5755
4700	4169	1611	5780
4900	4174	1651	5825
5100	4179	1686	5865
5300	4184	1693	5877
5500	4189	1726	5915
5700	4229	1746	5975
5900	4234	1766	6000
6300	4304	1826	6130

Chassis cab weight includes 20 litres of fuel, oil and water. Driver not included. See overleaf for option weights.

P 230 DB4x2MNA

SL5450847
August 06

ENGINE (EURO 4)

Scania '9 litre' vertical five cylinder in-line turbocharged intercooled direct injection diesel with unit injectors.

'230'

Type:	DC9-16
Swept Volume:	8.9 litres
Bore:	127 mm
Stroke:	140 mm
Compression Ratio:	17:1
*Max. Power:	169kW (230 h.p.) at 1800 rev/min
*Max. Torque:	1050 Nm (774 lbf.ft) between 1100 and 1500 rev/min
Engine Management System:	EMS incorporating Cruise Control and speed limiter
Emission Control:	Scania EGR
Cooling:	Water cooled with rubber mounted 2 row radiator and electronically regulated fan
Coolant Capacity:	42 litres
Oil Capacity:	27 litres
Air Cleaner:	Dry replaceable paper element

Options:-

(1) Details as above except for the following:-

'270'

Type:	DC9-17
*Max. Power:	199kW (270 h.p.) at 1800 rev/min
*Max. Torque:	1250 Nm (922 lbf.ft) between 1100 and 1450 rev/min

(2) Details as above except for the following:-

'310'

Type:	DC9-18
*Max. Power:	228kW (310 h.p.) at 1800 rev/min
*Max. Torque:	1550 Nm (1143 lbf.ft) between 1100 and 1350 rev/min

(3) Provision for ED120 engine driven P.T.O.

*With fan at max. slip

CLUTCH

Type:	Single dry plate
Operation:	Air assisted with clutch wear protection

GEARBOX

Type:	Scania G670 six speed synchromesh – '230' and '270' engines only
Type:	Scania GR875 eight speed synchromesh (four speed main fitted with two speed planetary range unit) – standard with '310' engine.
Oil Capacity:	11.1 litres

GEAR RATIOS

Low Range		High Range	
1st	7.72:1	5th	1.30:1
2nd	4.42:1	6th	1.00:1
3rd	2.86:1		
4th	1.92:1		
Reverse	7.10:1		

Options:-

(1) **Type:** Scania GR875 - eight speed synchromesh (four speed main fitted with two speed planetary range unit).

(2) **Type:** Scania GR905 - eight speed synchromesh (four speed main fitted with two speed planetary range unit) plus one crawler gear.

(3) **Type:** Scania GRS895 twelve speed synchromesh (three speed main fitted with two speed planetary range unit plus splitter).

(4) **Opticruise:** Gearchange management system – all engines with GR875 – '270' and '310' only with GRS895

(5) **Type:** Automatic six speed electronically controlled – R660 rear axle gear mandatory.

REAR AXLE

Type:	Scania ADA1100
Capacity:	11500 Kg

Pressed steel housing with magnetic oil drain plug.

REAR AXLE GEAR

Type: Scania R560 – '230' and '270' engines
Single reduction hypoid. Crown wheel and pinion matched during manufacture.

Options:-

(1) **Type:** Scania R660 with differential lock – mandatory with '310' engine.

FRONT AXLE

Type:	Scania AM740 I section rigid beam - AMA740 with air suspension.
Capacity:	7500Kg

Options:-

(1) **Scania AM950 - capacity 9000kg**

(2) **Scania AMA860 - air only - capacity 8000kg**

STEERING

Type: Recirculating ball. Hydraulically assisted power steering

Steering wheel: Diameter 450mm. Lock to lock 4.9 turns

Turning circle: Kerb to kerb

4.5m A/D	16.4m	4.7m A/D	17.1m	4.9m A/D	17.8m
5.1m A/D	18.5m	5.3m A/D	19.2m	5.5m A/D	19.8m
5.7m A/D	20.6m	5.9m A/D	21.4m	6.3m A/D	22.8m

SUSPENSION

Type Front: Semi-elliptic parabolic springs with swinging shackles and threaded shackle pins.

Type Rear: Quarter elliptic with air bellows (A). Chassis height may be raised or lowered to assist loading. Double acting telescopic shock absorbers are fitted to both axles.

Options:-

(1) **Front anti-roll bar**

SPRING SIZE

	Front
Length:	1820mm
No. of leaves	2 x 32mm
Design Capacity	7500Kg

Options:-

(1) **Air suspension on front axle – design capacity 7500 or 8000 kg.**

(2) **3 x 29mm leaves – design capacity 8500 kg.**

(3) **4 x 28mm leaves – design capacity 9000 kg.**

WHEELS & TYRES

8.25 x 22.5 ten stud spigot mounted disc wheels fitted with 295/80R22.5 radial tubeless tyres.

Options:-

(1) **9.00 x 22.5 wheels with 315/80R22.5 tyres**

(2) **11.75 x 22.5 wheels with 385/65R22.5 or 385/55R22.5 tyres - front axle only**

(3) **Aluminium wheels - machined or polished surface finish**

(4) **Front wheel embellishers**

FRAME

Type: F800-50 for axle distance 4500mm to 5900mm
F950-50 for axle distance 6300mm and for all 'H' duty class.

Flat top constant depth 'U' channel with riveted crossmembers

Sidemember Dimensions:

F800 - 270 x 90 x 8mm

F950 - 270 x 90 x 9.5mm

Pre-drilled for bodywork mounting brackets

Width over parallel section of frame = 770mm

Bumper: Aerodynamic incorporating FUP

Options:- (1) **Steel bumper – increases front overhang to 1510mm.**

(2) **Centre tow pin – steel bumper only.**

BRAKE SYSTEM

Type: Ventilated disc brakes on all axles. Dual circuit, full air, EC brake system incorporating Category 1 ABS and Traction Control. Electronic signalling with pneumatic back-up. Pad wear indicator. Brake pipes manufactured from either rust protected steel or high impact synthetics

Service Circuit: Actuates all truck brakes

Secondary Circuit: First position of park brake lever actuates spring chambers on both axles

Parking Brake: Actuates spring chambers on both axles

Exhaust Brake: Air actuated operated by brake pedal

Brake Antifreeze Protection: Air dryer

Brake Wear Adjusters: Automatic

Options:-

- (1) 2 line EC trailer brake pipes to rear of chassis – N/A with G670 gearbox.
(2) Scania Hydraulic Retarder – N/A with G670 gearbox.

BRAKE DIMENSIONS

Pad lining area: 2 x 190cm² on all axles

Swept area of each disc: 2 x 940cm²

ELECTRICAL SYSTEM

Type: 24V neg (-ve) earth **Alternator:** 100A

Batteries: Twin 140Ah

Rear H.I. lamps, Reversing lights, Battery connection - 200A

Options:-

- (1) 180Ah batteries, (2) 225Ah batteries,
(3) Bodywork electrical preparation – see separate document.

FUEL TANK

1 x 300 litre aluminium RHS

Options:- (Minimum axle distance and suspension type in brackets)

	RH Side	LH Side	RH Side	LH Side
Steel - G	150	150	Aluminium - W	200
	200	200		300
	300	300		350
	450	450		500
				600
				700

Tank sizes can be supplied in LH + RH combinations of the above but steel and aluminium cannot be mixed. Sides viewed from rear.

GENERAL EQUIPMENT

Front tow pin

Options:-

- (1) Vertical exhaust outlet, (2) ADR to EXIII/EXIII, FL, OX or AT

INSTRUMENTS & CONTROLS

Two man, 1 day, EC digital tachograph, rev-counter, gauges for air pressure (2), coolant temperature and fuel. Six speed wipers with four jet integral screen wash. Halogen headlamps adjustable from cab for correction of beam height. Warning lights for all major systems grouped within easy vision.

Instrument panel of modular design with switches and controls grouped according to usage. All instruments are back-lit and non-reflective. Impact absorbing, adjustable steering wheel with column lock.

CAB

CP16 Day Cab

Please see separate specification – 'Scania Cabs' for equipment levels.

Options:-

- (1) CP19 Sleeper Cab
(2) CP14

P.T.O. OPTIONS Check gearbox availability

	G670	GR875/GRS895	GR905/GRS905	GRS0905
EG551CC/561:	6 0.54			
EG650CC/660:	5		1.00/1.24H	
EG651CC/661:	5		1.28/1.58H	
EG652CC/662:	5			0.82/1.03H
EG653CC/663:	5			1.03/1.29H
EG654CC/664:	5	1.00/1.24H		
EG655CC/665:	5	1.28/1.58H		
EK730CC/740:	12	1.00	1.00	1.00

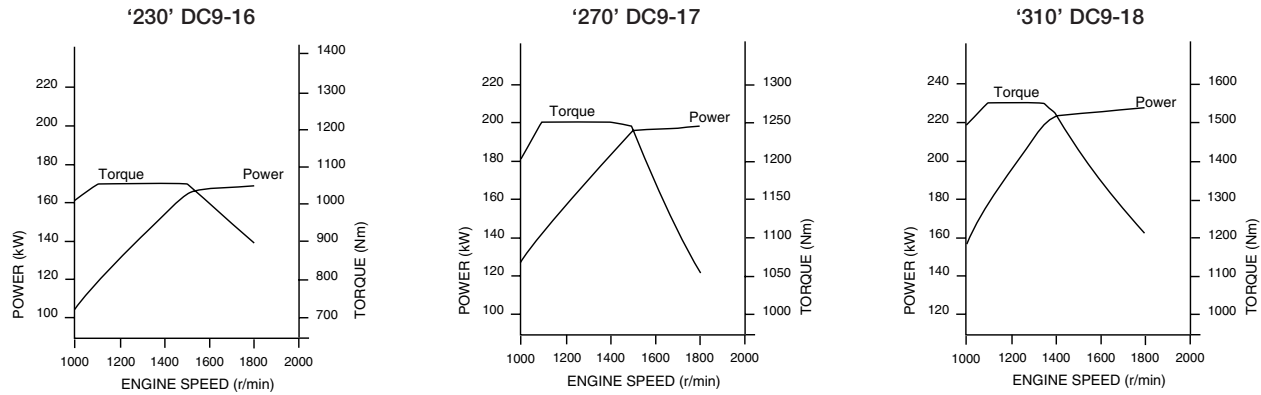
CC = close coupled H = High on 'S' splitter gearboxes only
Shaft output N/A on 6 x 2/4 chassis

WEIGHTS FOR OPTIONAL EQUIPMENT IN KILOGRAMS (Front – Rear – Total)

Axle Distance	45	47	49	51	53	55	57	59	63
GR875	+24 +8 +32	+25 +7 +32	+25 +7 +32	+26 +6 +32	+26 +6 +32	+26 +6 +32	+27 +5 +32	+27 +5 +32	+28 +4 +32
GR905	+58 +16 +74	+59 +15 +74	+59 +15 +74	+61 +13 +74	+61 +13 +74	+61 +13 +74	+62 +12 +74	+63 +11 +74	+64 +10 +74
GRS895	+26 +8 +34	+27 +7 +34	+27 +7 +34	+28 +6 +34	+28 +6 +34	+28 +6 +34	+29 +5 +34	+29 +5 +34	+30 +4 +34
AM950 front axle	+13 0 +13	+13 0 +13	+13 0 +13	+13 0 +13	+13 0 +13	+13 0 +13	+13 0 +13	+13 0 +13	+13 0 +13
Front anti-roll bar	+34 -1 +33	+34 -1 +33	+34 -1 +33	+34 -1 +33	+34 -1 +33	+34 -1 +33	+34 -1 +33	+34 -1 +33	+34 -1 +33
Air suspension front	+40 +15 +55	+40 +15 +55	+40 +15 +55	+40 +15 +55	+40 +15 +55	+40 +15 +55	+40 +15 +55	+40 +15 +55	+40 +15 +55
3 x 29mm f/springs	+44 0 +44	+44 0 +44	+44 0 +44	+44 0 +44	+44 0 +44	+44 0 +44	+44 0 +44	+44 0 +44	+44 0 +44
4 x 29mm f/springs	+73 0 +73	+73 0 +73	+73 0 +73	+73 0 +73	+73 0 +73	+73 0 +73	+73 0 +73	+73 0 +73	+73 0 +73
315/80 tyres/ 9.00 rims	+18 +36 +54	+18 +36 +54	+18 +36 +54	+18 +36 +54	+18 +36 +54	+18 +36 +54	+18 +36 +54	+18 +36 +54	+18 +36 +54
385/55 tyres/ 11.75 rims	+46 N/A +46	+46 N/A +46	+46 N/A +46	+46 N/A +46	+46 N/A +46	+46 N/A +46	+46 N/A +46	+46 N/A +46	+46 N/A +46
385/65 tyres/ 11.75 rims	+54 N/A +54	+54 N/A +54	+54 N/A +54	+54 N/A +54	+54 N/A +54	+54 N/A +54	+54 N/A +54	+54 N/A +54	+54 N/A +54
Aluminium Wheels									
8.25x22.5	-24 -48 -72	-24 -48 -72	-24 -48 -72	-24 -48 -72	-24 -48 -72	-24 -48 -72	-24 -48 -72	-24 -48 -72	-24 -48 -72
9.00x22.5	-30 -60 -90	-30 -60 -90	-30 -60 -90	-30 -60 -90	-30 -60 -90	-30 -60 -90	-30 -60 -90	-30 -60 -90	-30 -60 -90
11.75x22.5	-44 N/A -44	-44 N/A -44	-44 N/A -44	-44 N/A -44	-44 N/A -44	-44 N/A -44	-44 N/A -44	-44 N/A -44	-44 N/A -44
F950 frame	+42 +44 +86	+44 +47 +91	+46 +50 +96	+48 +53 +101	+50 +56 +106	+52 +59 +111	+54 +62 +116	+56 +65 +121	Std
Retarder	+74 +15 +89	+75 +14 +89	+75 +14 +89	+76 +13 +89	+77 +12 +89	+78 +11 +89	+78 +11 +89	+78 +11 +89	+79 +10 +89
180Ah Batteries	+14 +3 +17	+14 +3 +17	+14 +3 +17	+14 +3 +17	+14 +3 +17	+14 +3 +17	+14 +3 +17	+14 +3 +17	+14 +3 +17
225Ah Batteries	+45 +11 +56	+45 +11 +56	+45 +11 +56	+45 +11 +56	+45 +11 +56	+45 +11 +56	+45 +11 +56	+45 +11 +56	+45 +11 +56
Std. Tank Full	+140 +84 +224	+143 +81 +224	+146 +78 +224	+149 +75 +224	+152 +72 +224	+155 +69 +224	+157 +67 +224	+160 +64 +224	+164 +60 +224
*1 x 450l G	+72 +99 +171	+76 +95 +171	+80 +91 +171	+84 +87 +171	+87 +84 +171	+90 +81 +171	+93 +78 +171	+96 +75 +171	+100 +71 +171
Vertical exh outlet	+45 +12 +57	+45 +12 +57	+45 +12 +57	+45 +12 +57	+45 +12 +57	+45 +12 +57	+45 +12 +57	+45 +12 +57	+45 +12 +57
CP14 cab	-35 +2 -33	-35 +2 -33	-35 +2 -33	-35 +2 -33	-35 +2 -33	-35 +2 -33	-35 +2 -33	-35 +2 -33	-35 +2 -33
CP19 sleeper cab	+119 -13 +106	+119 -13 +106	+119 -13 +106	+119 -13 +106	+119 -13 +106	+119 -13 +106	+119 -13 +106	+119 -13 +106	+119 -13 +106
Air deflectors-CP14	+40 +2 +42	+40 +2 +42	+40 +2 +42	+40 +2 +42	+40 +2 +42	+40 +2 +42	+40 +2 +42	+40 +2 +42	+40 +2 +42
-CP16	+39 +3 +42	+39 +3 +42	+39 +3 +42	+39 +3 +42	+39 +3 +42	+39 +3 +42	+39 +3 +42	+39 +3 +42	+39 +3 +42
-CP19	+39 +3 +42	+39 +3 +42	+39 +3 +42	+39 +3 +42	+39 +3 +42	+39 +3 +42	+39 +3 +42	+39 +3 +42	+39 +3 +42
EG Series PTOs	+15 +3 +18	+15 +3 +18	+15 +3 +18	+15 +3 +18	+15 +3 +18	+15 +3 +18	+15 +3 +18	+15 +3 +18	+15 +3 +18
EK Series PTOs	+42 +5 +47	+42 +5 +47	+42 +5 +47	+42 +5 +47	+42 +5 +47	+42 +5 +47	+42 +5 +47	+42 +5 +47	+42 +5 +47

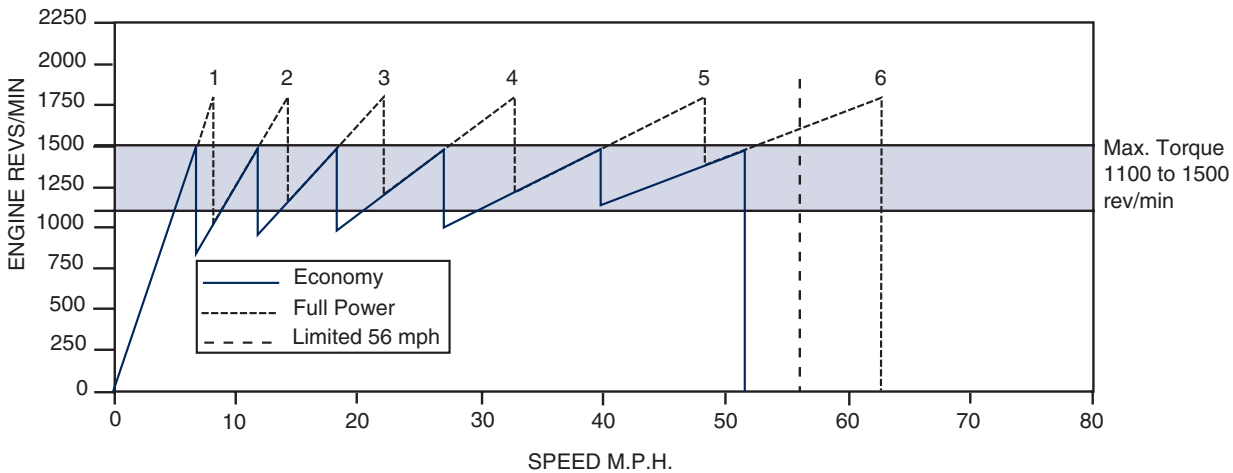
* Additional to standard tank full of fuel.

ENGINE PERFORMANCE



Net engine performance to 80/1269*1999/99EC

GEAR STEP DIAGRAM



SPEED/GRADEABILITY

Gradeability may be limited by tyre adhesion.

Axle gear/ Ratio	Optimum cruising Speed M.P.H.	Gradeability - steady climb - in percent								
		DC9-16			DC9-17			DC9-18		
		18T	28T\$	40T\$	18T	28T\$	40T\$	18T	28T\$	40T\$
R 560/660 2.92*	50 – 54	27.2	19.9	33.3	24.2	31.0	>35	30.8	>35	
R 560/660 3.07	54 – 56	25.1	18.4	30.6	22.3	28.5	>35	28.3	>35	
R 560/660 3.42 std.	48 – 51	28.2	20.6	34.5	25.0	32.1	>35	31.9	>35	
R 560/660 3.80	43 – 46	31.7	23.1	>35	28.1	>35	>35	>35	>35	
R 560/660 4.22	39 – 42	>35	25.8	>35	31.5	>35	>35	>35	>35	
R 560/660 4.88	34 – 36	>35	30.3	>35	>35	>35	>35	>35	>35	

\$28T calculations shown with GR875 gearbox. 40T calculations shown with GR905 gearbox. *2.92 only available with low profile tyres. Calculations based on 295/60R22.5 rear tyres. Remaining calculations assume standard specifications. Performance achieved in operation will depend on conditions, bodywork, gear ratios and tyre specification.

The specifications contained in this publication are intended as a general guide, and not as representations as to the product described, nor as binding in detail.